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EXAMINER	
WEINTROP, ADAM S	

ART UNIT	PAPER NUMBER
2145	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/686,741	NORTON ET AL.	
	Examiner	Art Unit	
	Adam S. Weintrop	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 5 and 16** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding **claims 5 and 16**, the limitation of a "long messaging service message" is utilized. This limitation does not have a proper description in the specification, as there is no mention of a "long messaging service message". The applicant must fully enable one of ordinary skill in the art to make and use the invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-7 and 21-27** rejected under 35 U.S.C. 102(b) as being anticipated by Joong et al. (US 6,188,887).

Regarding **claims 1 and 21**, Joong et al. anticipates:

A method of managing a network comprising, or a machine readable medium to store a set of instructions capable of being executed by a processor to: calculate a plurality of destination nodes based on a subscriber identifier and a plurality of addressing functions, each addressing function corresponding to a topology of the network at a particular moment in time (column 2, lines 51-61, where the optimally positioned message center is seen as one of many destination nodes, and it is based on the addressee mobile station, seen as the identifier and the current location of the mobile station, seen as the addressing function based on a current network topology).

Regarding **claims 2 and 22**, Joong et al. anticipates:

The method of claim 1 or the medium of claim 21, further including: receiving a message retrieval request at an initial retrieval node of the network, the message retrieval request including the subscriber identifier (column 8, lines 17-19 and column 8, line 59-column 9, line 10, where message retrieval is performed by accessing a message center, and the associated message center receives the request for messages, and it must include the subscriber identifier

since it then locates the home message center for the corresponding mobile station); and

querying the calculated plurality of destination nodes for a message (column 9, lines 2-10, where messages are extracted and then transferred back to the associated message center, seen as querying for messages at a plurality of nodes since it must query the associated message center and then the home message center).

Regarding **claim 3 and 23,** Joong et al. anticipates:

The method of claim 2 and the medium of claim 22, further including:

receiving the message from one of the calculated plurality of destination nodes;

forwarding the message toward an originator of the message retrieval request (column 9, lines 2-10 and column 8, lines 16-19, where the messages are extracted from the home mailbox and the associated mailbox, seen as a calculated plurality of nodes, and this process is initiated by a mobile client requesting messages from the mailbox).

Regarding **claims 4 and 24**, Joong et al. anticipates:

The method of claim 3 and the medium of claim 23, wherein the originator of the message retrieval request is a wireless handset, the message being at least one

of a short messaging service message and a mail digest (column 7, lines 46-48, with the messages being SMS messages, and column 1, lines 8-12, with the system being used for cell phone networks).

Regarding **claims 5 and 25**, Joong et al. anticipates:

The method of claim 3 or the medium of claim 23, wherein the originator of the message retrieval request is a wireless handset, the message being a long messaging service message (column 7, lines 53-60, with the system being used for email messages, facsimile messages, or voice messages, seen as long messaging service messages since they are not classified as short messaging service messages as they can possibly be able the size limit, and column 1, lines 8-12, with the system being used for cell phone networks).

Regarding **claims 6 and 26**, Joong et al. anticipates:

The method of claim 3 and the medium of claim 23, further including:
receiving a plurality of messages from the calculated plurality of destination nodes; and
forwarding the plurality of messages toward the originator of the message retrieval request (column 9, lines 2-10 and column 8, lines 16-19, where the messages are extracted from the home mailbox and the associated mailbox,

seen as a calculated plurality of nodes, and this process is initiated by a mobile client requesting messages from the mailbox).

Regarding **claims 7 and 27**, Joong et al. anticipates:

The method of claim 2 or the medium of claims 22, further including:
Receiving the message at an initial storage node, the message including the subscriber identifier (column 9, lines 20-24, where a message is received at the home mailbox and the message must include addressee information to identify the roaming mobile station as in column 9, lines 25-30);
calculating an actual destination node based on the subscriber identifier and a current addressing function corresponding to a current topology of the network (column 9, lines 2-5 and column 2, lines 51-61, where the optimally positioned message center is seen as the actual destination node, and it is based on the addressee mobile station, seen as the identifier and the current location of the mobile station, seen as the addressing function based on a current network topology); and
sending the message to the actual destination node for storage, the calculated plurality of destination nodes including the actual destination node and the plurality of addressing functions including the current addressing function (column 9, lines 21-30, where the actual node is the local mailbox associated with the mobile device, and any subsequent message will be forwarded there,

seen as having the calculated destination nodes include the current node and the addressing functions include the current function).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 8 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Piskiel et al. (US 5,916,307).

Regarding **claims 8 and 29**, Joong et al. discloses all of the limitations as described above except for storing the message in an internal queue of the initial node and removing the message from the internal queue if a confirmation receipt is received from the destination node. The general concept of using queues for inter-nodal communications and using confirmation receipts to remove data in queues is well known in the art as illustrated by Piskiel et al. Piskiel et al. teaches a distributed computing system that uses queues to manage communication between nodes. Piskiel et al. teaches that entries remain in the first node until a second node acknowledges the receipt of the information (column 3, lines 44-47). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with using queues and confirmation receipts as taught by Piskiel et al. in order to improve performance

while maintaining data integrity as noted in Piskiel et al.'s disclosure in column 2, line 65-column 3, line 2.

7. **Claims 9 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Link, II et al. (US 6,731,926).

Regarding **claims 9 and 28**, Joong et al. discloses all of the limitations as described above except for including a message-waiting indicator at the device associated with the subscriber identifier. The general concept of sending a message-waiting indicator to the device is well known in the art as illustrated by Link, II et al. Link, II et al. teaches that a message waiting indicator can be sent to any mobile device the subscriber has (column 5, lines 49-65, where a MWI, or a message waiting indicator is communicated through the network to the subscriber's devices, seen as the device associated with the subscriber identifier). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with using a message waiting indicator as taught by Link, II et al. in order to avoid the burden of constantly checking voice mail services by emphasizing the receipt of a message as noted in Link, II et al.'s disclosure in column 1, lines 65-67.

8. **Claims 10 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Rooke et al. (US 6,678,361).

Regarding **claims 10 and 30**, Joong et al. discloses all of the limitations as described above except for expiring the addressing functions based on a message validity period. The general concept of expiring addressing functions to store messages in a node based on the valid period of a message is well known in the art as illustrated by Rooke et al. Rooke et al. teaches that a message can be stored in a message service center or discarded, these being seen as addressing functions since they relate to where the message will be stored, and this decision is based on the expiration of the message, this being seen as the message validity period (column 3, lines 51-62). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with expiring an addressing function based off of a message validity period as taught by Rooke et al. in order to maintain storage capacity for message storage areas as noted in Rooke et al.'s disclosure in column 1, lines 37-43.

9. **Claims 11 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Dinker et al. (US 7,206,836).

Regarding **claims 11 and 31**, Joong et al. discloses all of the limitations as described above except for expiring an addressing function based on an expired node emitting a local expiration signal. The general concept of expiring an addressing function based on a node expiring is well known in the art as illustrated by Dinker et al. Dinker et al. teaches a cluster computer system in which clients can store data on the nodes (column 5, lines 1-6). Dinker et al. also

teaches that the cluster can detect a node failure, and a node failure prevents the node from participating in the cluster (column 6, lines 8-14, where a node failure is detected by signals coming from the node with ping messages, and a node failure being seen as a expiration of a node, and this causes no further data to be sent to the node, seen as expiring an addressing function based on the expiry of the node). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with using node expiration to stop addressing information to the node as taught by Dinker et al. in order to insure data integrity by creating data which is highly available as noted in Dinker et al.'s disclosure in column 1, lines 21-25.

10. **Claims 12-13 and 32-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Klots et al. (US 6,173,313).

Regarding **claims 12-13 and 32-33,** Joong et al. discloses all of the limitations as described above except for applying a time stamp to the addressing functions, delivering addressing functions to the nodes before activation, and having the addressing functions be hashing functions. The general concept of applying a time stamp to the addressing functions, delivering addressing functions to the nodes before activation, and having the addressing functions be hashing functions is well known in the art as illustrated by Klots et al. Klots et al. teaches a distributed storage system where the destination nodes are predetermined. The way the data is hosted is by utilizing hashing functions on the names of the

files (column 7, lines 48-53, where addressing functions are hashing functions since they control the destination node). The names are predetermined to assist in the determination of where the hosting of the file will be (column 7, lines 46-55, with the names being predetermined and this is seen as delivering addressing functions to the destination nodes before activation as the destination nodes are chosen by having the best affinity to the object and then the objects are named accordingly, so as to deliver the object with its preset addressing function from virtue of its name to the best node before the actual clustering occurs). The objects are also time stamped (column 7, line 66-column 8, line 3, where the base name is part of the addressing function that is time stamped as it determines what node to go to). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with time stamping and delivering of the addressing functions to the nodes and having the functions be hashing functions as taught by Klots et al. in order to increase the efficiency of hosting distributed objects by reducing name maintenance and overhead as noted in Klots et al.'s disclosure in column 3, lines 1-5.

11. **Claims 14-17 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887) in view of Piskiel et al. (US 5,916,307) and further in view of Link, II et al. (US 6,731,926) and further in view of Klots et al. (US 6,173,313).

Regarding **claims 14 and 20**, Joong et al. discloses:

A method of managing a network, comprising:

receiving a message at an initial storage node, the message including a subscriber identifier (column 8, lines 17-19 and column 8, line 59-column 9, line 10, where message retrieval is performed by accessing a message center, and the associated message center receives the request for messages, and it must include the subscriber identifier since it then locates the home message center for the corresponding mobile station);

calculating an actual destination node based on the subscriber identifier and a first addressing function corresponding to a current topology of the network (column 9, lines 2-5 and column 2, lines 51-61, where the optimally positioned message center is seen as the actual destination node, and it is based on the addressee mobile station, seen as the identifier and the current location of the mobile station, seen as the addressing function based on a current network topology);

Sending the message to the actual destination node for storage (column 9, lines 21-30, where the actual node is the local mailbox associated with the mobile device, and any subsequent message will be forwarded there);

Receiving a message retrieval request at an initial retrieval node of the network, the message retrieval request including the subscriber identifier (column 8, lines 17-19 and column 8, line 59-column 9, line 10, where message retrieval is performed by accessing a message center, and the associated message center receives the request for messages, and it must include the subscriber identifier since it then locates the home

message center for the corresponding mobile station);

calculating a plurality of destination nodes based on the subscriber identifier and a plurality of addressing functions , each addressing function corresponding to a topology of the network at a particular moment in time (column 2, lines 51-61, where the optimally positioned message center is seen as one of many destination nodes, and it is based on the addressee mobile station, seen as the identifier and the current location of the mobile station, seen as the addressing function based on a current network topology), the plurality of destination nodes including the actual destination node and the plurality of addressing functions including the first addressing function (column 9, lines 21-30, where the actual node is the local mailbox associated with the mobile device, and any subsequent message will be forwarded there, seen as having the calculated destination nodes include the current node and the addressing functions include the first addressing function);

querying the calculated plurality of destination nodes for the message (column 9, lines 2-10, where messages are extracted and then transferred back to the associated message center, seen as querying for messages at a plurality of nodes since it must query the associated message center and then the home message center);

Receiving the message from the actual destination node; and

forwarding the message toward an originator of the message retrieval request (column 9, lines 2-10 and column 8, lines 16-19, where the messages are extracted from the home mailbox and then the associated mailbox, seen as the actual destination node, and this process is initiated by a mobile client requesting messages from the mailbox).

Joong et al. does not teach:

Storing the message to an internal queue of the initial storage node;
removing the message from the internal queue if a confirmation of receipt is received from the actual destination node;
sending a message waiting indicator message toward a device associated with the subscriber identifier;
and wherein the addressing functions are hash functions, as required by claim 14, or
Applying a time stamp to each of the plurality of addressing functions and delivering each of the plurality of addressing functions to the plurality of destination nodes before activation, as required by claim 20.

The general concept of using queues for inter-nodal communications and using confirmation receipts to remove data in queues is well known in the art as illustrated by Piskiel et al. Piskiel et al. teaches a distributed computing system that uses queues to manage communication between nodes. Piskiel et al. teaches that entries remain in the first node until a second node acknowledges the receipt of the information (column 3, lines 44-47). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. with using queues and confirmation receipts as taught by Piskiel et al. in order to improve performance while maintaining data integrity as noted in Piskiel et al.'s disclosure in column 2, line 65-column 3, line 2.

Joong et al. and Piskiel et al. do not teach:

Sending a message waiting indicator message toward a device associated with the subscriber identifier;
and wherein the addressing functions are hash functions, as required by claim 14, or applying a time stamp to each of the plurality of addressing functions and delivering each of the plurality of addressing functions to the plurality of destination nodes before activation, as required by claim 20.

The general concept of sending a message-waiting indicator to the device is well known in the art as illustrated by Link, II et al. Link, II et al. teaches that a message waiting indicator can be sent to any mobile device the subscriber has (column 5, lines 49-65, where a MWI, or a message waiting indicator is communicated through the network to the subscriber's devices, seen as the device associated with the subscriber identifier). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al. and Piskiel et al. with using a message waiting indicator as taught by Link, II et al. in order to avoid the burden of constantly checking voice mail services by emphasizing the receipt of a message as noted in Link, II et al.'s disclosure in column 1, lines 65-67.

Joong et al., Piskiel et al., and Link, II et al. do not teach:

Wherein the addressing functions are hash functions, as required by claim 14 or applying a time stamp to each of the plurality of addressing functions and delivering each of the plurality of addressing functions to the plurality of destination nodes before activation, as required by claim 20.

The general concept of applying a time stamp to the addressing functions, delivering addressing functions to the nodes before activation, and having the addressing functions be hashing functions is well known in the art as illustrated by Klots et al. Klots et al. teaches a distributed storage system where the destination nodes are predetermined. The way the data is hosted is by utilizing hashing functions on the names of the files (column 7, lines 48-53, where addressing functions are hashing functions since they control the destination node). The names are predetermined to assist in the determination of where the hosting of the file will be (column 7, lines 46-55, with the names being predetermined and this is seen as delivering addressing functions to the destination nodes before activation as the destination nodes are chosen by having the best affinity to the object and then the objects are named accordingly, so as to deliver the object with its preset addressing function from virtue of its name to the best node before the actual clustering occurs). The objects are also time stamped (column 7, line 66-column 8, line 3, where the base name is part of the addressing function that is time stamped as it determines what node to go to). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al.,

Piskiel et al., and Link, II et al. with time stamping and delivering of the addressing functions to the nodes and having the functions be hashing functions as taught by Klots et al. in order to increase the efficiency of hosting distributed objects by reducing name maintenance and overhead as noted in Klots et al.'s disclosure in column 3, lines 1-5.

Regarding **claim 15**, Joong et al., Piskiel et al., Link, II et al., and Klots et al. teach all of the limitations as described above, with Joong et al. further teaching:

> The method of claim 14, wherein the originator of the message retrieval request is a wireless handset, the message being at least one of a short messaging service message and a mail digest (column 7, lines 46-48, with the messages being SMS messages, and column 1, lines 8-12, with the system being used for cell phone networks).

Regarding **claim 16**, Joong et al., Piskiel et al., Link, II et al., and Klots et al. teach all of the limitations as described above, with Joong et al. further teaching:

> The method of 14, wherein the originator of the message retrieval request is a wireless handset, the message being a long messaging service message (column 7, lines 53-60, with the system being used for email messages, facsimile

messages, or voice messages, seen as long messaging service messages since they are not classified as short messaging service messages as they can possibly be able the size limit, and column 1, lines 8-12, with the system being used for cell phone networks).

Regarding **claim 17**, Joong et al., Piskiel et al., Link, II et al., and Klots et al. teach all of the limitations as described above, with Joong et al. further teaching:

The method of claim 14, further including:
receiving a plurality of messages from the calculated plurality of destination nodes; and
forwarding the plurality of messages toward the originator of the message retrieval request (column 9, lines 2-10 and column 8, lines 16-19, where the messages are extracted from the home mailbox and the associated mailbox, seen as a calculated plurality of nodes, and this process is initiated by a mobile client requesting messages from the mailbox).

12. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887), Piskiel et al. (US 5,916,307), Link, II et al. (US 6,731,926), and Klots et al. (US 6,173,313) as applied to claim 14 above, and further in view of Rooke et al. (US 6,678,361).

Regarding **claim 18**, Joong et al., Piskiel et al., Link, II et al, and Klots et al. disclose all of the limitations as described above except for expiring the addressing functions based on a message validity period. The general concept of expiring addressing functions to store messages in a node based on the valid period of a message is well known in the art as illustrated by Rooke et al. Rooke et al. teaches that a message can be stored in a message service center or discarded, these being seen as addressing functions since they relate to where the message will be stored, and this decision is based on the expiration of the message, this being seen as the message validity period (column 3, lines 51-62). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al., Piskiel et al., Link, II et al, and Klots et al. with expiring an addressing function based off of a message validity period as taught by Rooke et al. in order to maintain storage capacity for message storage areas as noted in Rooke et al.'s disclosure in column 1, lines 37-43.

13. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (US 6,188,887), Piskiel et al. (US 5,916,307), Link, II et al. (US 6,731,926), and Klots et al. (US 6,173,313) as applied to claim 14 above, and further in view of Dinker et al. (US 7,206,836).

Regarding **claim 19**, Joong et al., Piskiel et al., Link, II et al, and Klots et al. disclose all of the limitations as described above except for expiring an addressing function based on an expired node emitting a local expiration signal.

The general concept of expiring an addressing function based on a node expiring is well known in the art as illustrated by Dinker et al. Dinker et al. teaches a cluster computer system in which clients can store data on the nodes (column 5, lines 1-6). Dinker et al. also teaches that the cluster can detect a node failure, and a node failure prevents the node from participating in the cluster (column 6, lines 8-14, where a node failure is detected by signals coming from the node with ping messages, and a node failure being seen as a expiration of a node, and this causes no further data to be sent to the node, seen as expiring an addressing function based on the expiry of the node). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Joong et al., Piskiel et al., Link, II et al, and Klots et al. with using node expiration to stop addressing information to the node as taught by Dinker et al. in order to insure data integrity by creating data which is highly available as noted in Dinker et al.'s disclosure in column 1, lines 21-25.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

"A Distributed Decentralized Information Storage and Retrieval System" by Ian Clarke describes a general distributed node storage system.

"Exploiting Network Proximity in Distributed Hash Tables" by Castro et al. describes using distributed hash tables for distributed applications with emphasis on proximity based hash tables.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam S. Weintrop whose telephone number is 571-270-1604. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW 6/4/07

JASON CARDONE
SUPERVISORY PATENT EXAMINER